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AMENDMENTS TO THE SPECIFICATION

Please AMEND the specification as follows:

On page 7, second full paragraph:

~~Photoconductive~~Photosensitive, adhesive seal resin 2 can be removed beforehand from the portions of a chip circuit surface where it would effect a device characteristic, e.g., an I.D.T. electrode portion included in the SAW filter 9. The seal resin 2 can therefore hermetically seal the package and insure reliable connection without flowing into gaps 3 between the electronic devices. Further, three or more chips may be stacked in the direction of height, if desired. This promotes dense mounting of electronic devices. In FIG. 2, the reference numeral 8 designates electrode pads.

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In the paragraph bridging pages 8 and 9:

In accordance with the present invention, a method of assembling electronic devices connects the devices by connecting conductive portions, or bumps, by use of thermocompression or by applying an ultrasonic wave with a light load at low temperature around room temperature. The devices are therefore connected at the above relatively low temperature by the ~~photoconductive~~photosensitive, thermosetting seal resin. If the seal resin has tackiness and low elasticity, the insulating portions can be connected by thermocompression in a short period of time at low temperature with low stress. The conductive portions can therefore be connected in about 1 second when use is made of an ultrasonic wave, while the insulating portions can be connected in about 1 second. The total connecting time is as short as 2 seconds. This, coupled with the fact that the method of the present invention does not need underfill resin after the

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connection of electronic devices, reduces the connecting time to a considerable degree and enhances productivity.

On page 9, second full paragraph:

In accordance with the present invention, ~~photoconductive~~photosensitive resin is used as the adhesive seal resin to be deposited on an electronic device in the form of a layer. After the resin has been removed from, e.g., the I.D.T. electrode portion of a SAW filter where the resin would effect a device characteristic, the periphery of a package may be sealed by hermetic seal welding or similar means after the connection of electronic devices. In accordance with the present invention, sealing can be effected at the same time as the connection of electronic devices. Further, as shown in FIGS. 3A through 3D, another electronic device may be connected to an electronic device to which a SAW filter has been connected.

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In the paragraph bridging pages 9 and 10:

In accordance with the present invention, in the case where ~~photoconductive~~photosensitive, adhesive seal resin is patterned, use is made of resin whose aspect ratio is 1. Such resin can be patterned with a thickness of 10 μm and a pitch of about 10 μm that meet the increasing demand for a small pitch, area bump layout. This allows electronic devices to be mounted tridimensionally without resorting to a carrier circuit board.

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On page 12, last full paragraph:

A seal resin layer is formed on an electronic device implemented as a wafer, as follows. ~~Photoconductive~~Photosensitive, thermosetting seal resin is coated on the device to a thickness of 1 μm to 100 μm by, e.g., a roller coater, a curtain-flow coater, screen printing or a spin coater and then dried. Subsequently, not only the seal resin layer around the pads and bumps, but also

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the seal resin around circuit board wiring protruding from another electronic device to be connected, are removed by exposure and development via a photomask. Further, when a passive device is mounted on another electronic device to be connected, the above seal resin around the passive device is removed. In addition, the seal resin is removed from portions where it would effect the device characteristic of another device.

On page 13, third full paragraph:

Assume that the electronic device subjected to such preprocessing and another electronic device are connected together. Then, the ~~photoconductive~~photosensitive, thermosetting seal resin layer exists between the function device and the circuit board. On the other hand, in the gap between the active surfaces of the two devices, the seal resin layer is absent around a coil (L), capacitor (C), resistor (R) or similar passive device mounted on the device. Also, the seal resin layer is absent around portions where it would effect the device characteristic of the device to be connected, portions around the pads, and portions around the bumps.

In the paragraph bridging pages 14 and 15:

A procedure for connecting two electronic devices will be described with reference to FIGS. 3A through 3D. First, two electronic devices are positioned relative to each other. Then, as shown in FIG. 3A, bumps 1 formed on one device 20 and electrode pads 8 formed in the other device 30 and aligned with the bumps 1 are caused to contact each other and then bonded by thermocompression or an ultrasonic wave. As shown in FIG. 3B, at the same time as or after the thermocompression or ultrasonic bonding, a load sufficient to smash the bumps 1 and bring the surface of a ~~photoconductive~~photosensitive, thermosetting resin layer 2 formed on the device 20 into contact with the surface of the device 30 is applied. In this condition, the devices 20 and 30

Cont. A 137

are heated to connect the seal resin layer 2, which exist in insulating portions, to the surface of the device 30. To prevent the seal resin 2 from flowing out during connection, dents may be formed in the portions of a circuit board expected to contact the seal resin 2 beforehand.

On page 15, second full paragraph:

A plurality of device assemblies each having the above-described structure are introduced into a drier together in order to cure the ~~photoconductive~~photosensitive, thermosetting seal resin. If desired, another seal resin may be dropped onto the periphery of each device assembly via a dispenser and then cured together with the ~~photoconductive~~photosensitive, thermosetting resin in the drier.

On page 16, last full paragraph:

In the condition shown in FIG. 4E, the device was coated with the previously mentioned ~~photoconductive~~photosensitive, thermosetting seal resin V-259PA by a spin coater to a thickness of about 22 μm. The seal resin was dried and then exposed and developed via a photomask, forming a resin pattern. At this instant, the seal resin was removed not only from the positions around the pads and bumps, but also from the positions expected to align with wiring protruding from another electronic device to be connected. Thereafter, the device was cut away by dicing. Let this device be referred to as a first Si device in distinction from a second Si device to be connected thereto.

On page 17, third full paragraph:

Subsequently, to connect the ~~photoconductive~~photosensitive, thermosetting seal resin 2 and second Si device by thermocompression, temperature was elevated from room temperature to 400°C and held at 400°C for 1 second. A load was increased up to 5 kg in accordance with

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the temperature elevation of a pulse heater, which is included in the tool. In this manner, the connection of the electrode pads 8 and bumps 1 and the connection of the two Si devices via the seal resin 2 were effected at the same time.

On page 19, first full paragraph:

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Impurities on the surface of a circuit board were removed by a plasma asher. The ~~photeconductive~~photosensitive, thermosetting seal resin V-259PA was coated on the above surface to a thickness of 20 μm to 50 μm and then dried. Subsequently, the seal resin was exposed and developed via a photomask and removed thereby from portions around the wiring of the circuit board and a portion corresponding to the I.D.T. electrode portion of a SAW chip to be connected later, completing a circuit board for mounting a function device. The function device and SAW chip was connected together by DB200 mentioned earlier.

On page 21, second full paragraph:

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As shown in FIG. 3C, the subassembly of the SAW chip 20 and circuit board 30 was connected to a silicon circuit board 4 by thermocompression. A ~~photoconductive~~photosensitive, adhesive resin seat 2 accommodating solder balls 1 was adhered to the silicon circuit board 4 and was removed from around the bumps 1 and a region corresponding to the SAW chip 20 by exposure and development beforehand. The resulting assembly is shown in FIG. 3D. The SAW chip 20 was found to have a filter characteristic required of a SAW filter.

In the paragraph bridging pages 21 and 22:

B13

Assume that an ultrasonic wave is applicable to the connection of insulating portions implemented by ~~photoconductive~~photosensitive, thermosetting seal resin, which is patterned by exposure and development. Then, when bumps and electrode pads, i.e., conductive portions are

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connected by an ultrasonic wave, heat and load may be applied at the same time in order to connect even the insulating portions. After the connection, a plurality of such device assemblies are dried in a drier at the same time so as to cure the seal resin.

On page 22, first full paragraph:

If desired, another seal resin may coat the periphery of the chips before the device assemblies or packages are introduced into the drier. In such a case, the above seal resin will be cured together with the ~~photoconductive~~photosensitive, thermosetting seal resin in the drier. Also, another electronic device in the form of a wafer may be connected so as to implement CSP at the wafer level.

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In the paragraph bridging pages 22 and 23:

In summary, in accordance with the present invention, two or more electronic devices can be connected together. Also, not only semiconductor devices and other active devices, but also capacitors, resistors and other passive devices and a circuit board can be connected together. These advantages are derived from the following unique configuration. Metal bumps connect conductive portions white adhesive seal resin connects insulating portions, implementing structurally rigid connection. Further, when use is made of ~~photoconductive~~photosensitive resin as seal resin, it can be so patterned as to be absent around wiring portions protruding from a circuit board, around passive elements mounted between electronic devices, around the portions of a circuit board of an electronic device where the resin would effect the device characteristic, and around bumps and electrode pads.

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On page 23, first full paragraph:

Also, in accordance with the present invention, two or more electrode devices can be connected without resorting to underfill resin conventionally fed after connection. This obviates an occurrence that voids appear in the underfill resin after the resin has been cured. Specifically, the connection of conductive portions using the bumps and that of insulating portions using the resin can be effected at the same time by an ultrasonic wave or thermocompression. Also, when use is made of photoconductive resin, the resin can be so patterned as to be absent around the bumps before connection even if the pitch of the bumps is small.

In the paragraph bridging pages 23 and 24:

Moreover, in accordance with the present invention, a three-dimensional mounting structure is achievable without regard to the arrangement of bumps and without the intermediary of a carrier circuit board. Specifically, assume that ~~photoconductive~~photosensitive, adhesive seal resin is patterned. Then, if the resin has an aspect ratio of 1, it can be patterned with a thickness of 10 μm and a pitch of about 10 μm. It follows that a resin pattern capable of coping with the decreasing pitch of an area bump layout is attainable.